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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,887	01/29/2002	Sekiji Nishino	826.1788	2402

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EXAMINER

LE, JOHN H

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 06/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AP

**Office Action Summary**

Application No.

10/057,887

Applicant(s)

NISHINO ET AL.

Examiner

John H Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 2-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> | 6) <input type="checkbox"/> Other:  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 7, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al. (USP 5,940,310) in view of Burnett et al. (USP 5,966,524).

Regarding claims 1, 7, 8, and 9, Yamaguchi et al. teach a computer-readable storage medium used by a computer generating data input to an electromagnetic field intensity calculating device that calculates an intensity of an electromagnetic field emitted from an electric circuit device having a metal cabinet, on which is recorded a program for causing the computer to execute a process, the process comprising (Col.5, lines 10-14): receiving specification of one or more surfaces among surfaces configuring the metal cabinet (Col.4, lines 58-59, Col. 8, lines 16-23); extracting surface data of a specified surface from three-dimensional data of the electric circuit device (Col.1, lines 45-49, Col.4, lines 58-65); partitioning a surface corresponding to the surface data into meshes (Col.5, lines 15-36); and outputting data partitioned into meshes to the electromagnetic field intensity calculating device (Col.5, line 63-Col.6, line 49).

Yamaguchi et al. fail to teach the quadrilateral meshes.

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Burnett et al. teach a digital processing for computing the set of element matrix coefficients for each element of mesh, which including the quadrilateral meshes (Col.7, lines 39-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to inform the quadrilateral meshes as taught by Burnett et al. in a device for calculating electromagnetic field strength of Yamaguchi et al. for the purpose of providing a new electromagnetic infinite element, substantial computational efficiencies can be achieved by partitioning the problem space into a finite region (Burnett et al., Col.4, lines 33-43).

***Allowable Subject Matter***

3. Claims 2-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, none of the prior art of record teaches or suggests the combination of an input data generating method generating data input to an electromagnetic field intensity calculating device, which calculates an intensity of an electromagnetic field emitted from an electric circuit device having a metal cabinet, wherein the method comprising steps of extracting surface data of the metal cabinet from three-dimensional data of the electric circuit device; partitioning a surface corresponding to the surface data into quadrilateral meshes; wherein the method

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further comprising steps of extracting data of a same surface composed of a plurality of surfaces existing on a front or a back of a metal plate which configures the metal cabinet from a plurality of pieces of surface data, if the surface data is composed of the plurality of pieces of surface data including the front and the back of the metal plate; partitioning each of the plurality of surfaces configuring the same surface into quadrilateral meshes; and outputting data partitioned into meshes to the electromagnetic field intensity calculating device. It is these limitations as they are claimed in the combination, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 5, none of the prior art of record teaches or suggests the combination of an input data generating method generating data input to an electromagnetic field intensity calculating device, which calculates an intensity of an electromagnetic field emitted from an electric circuit device having a metal cabinet, wherein the method comprising steps of extracting surface data of the metal cabinet from three-dimensional data of the electric circuit device; partitioning a surface corresponding to the surface data into quadrilateral meshes; wherein the method further comprising steps of partitioning each of a plurality of surfaces into quadrilateral meshes, if the surface data of the metal cabinet is data corresponding to the plurality of surfaces ; making a comparison between coordinates of partitioning points on two sides which can possibly be a side shared by contiguous surfaces among the plurality of surfaces ; recognizing data of the partitioning points to be data shared by the contiguous surfaces, if the coordinates of the partitioning points are determined to

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match within a preset tolerance; and outputting data partitioned into meshes, which include the shared data, to the electromagnetic field intensity calculating device. It is these limitations as they are claimed in the combination, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 6, none of the prior art of record teaches or suggests the combination of an input data generating method generating data input to an electromagnetic field intensity calculating device, which calculates an intensity of an electromagnetic field emitted from an electric circuit device having a metal cabinet, wherein the method comprising steps of extracting surface data of the metal cabinet from three-dimensional data of the electric circuit device; partitioning a surface corresponding to the surface data into quadrilateral meshes; wherein the method further comprising steps of repartitioning the quadrilateral meshes by aligning the surface corresponding to the surface data of the metal cabinet with a shape of a surface whose material is different from the metal cabinet, and which is superposed on the corresponding surface and has an area smaller than the corresponding surface, exists, after the corresponding surface is partitioned into the quadrilateral meshes; and outputting data which is partitioned into meshes and further repartitioned to the electromagnetic field intensity calculating device. It is these limitations as they are claimed in the combination, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

***Other Prior Art***

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4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Ohtsu et al. (USP 5,745,370) disclose an electromagnetic field intensity-calculating device.

Nishino et al. (USP 5,650,935) disclose an apparatus for calculating intensity of an electromagnetic field.

**Contact Information**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Le whose telephone number is (703) 605-4361. The examiner can normally be reached on Monday to Friday from 9:00 AM to 5:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. John Barlow, can be reached at (703) 308-3126. The facsimile number for Technology Center 2800 is (703) 308-5841.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist of the Technology Center whose telephone number is (703) 308-0956.

John H. Le

Patent Examiner-Group 2863

June 24, 2003

  
John Barlow  
Supervisory Patent Examiner  
Technology Center 2800